

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056600 A2

(51) International Patent Classification⁷: C07K 16/10,
A61K 39/395, C12N 15/68

(21) International Application Number:
PCT/US2004/040674

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/528,161 8 December 2003 (08.12.2003) US
60/541,676 4 February 2004 (04.02.2004) US
60/552,528 12 March 2004 (12.03.2004) US
60/574,492 26 May 2004 (26.05.2004) US
60/624,261 1 November 2004 (01.11.2004) US

(71) Applicant (for all designated States except US): THE
GOVERNMENT OF THE UNITED STATES OF

AMERICA, AS REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES [US/US]; National Institutes of Health, Office of Technology Transfer, 6011 Executive Blvd., Suite 325, Rockville, MD 20852-3804 (US).

(72) Inventors; and

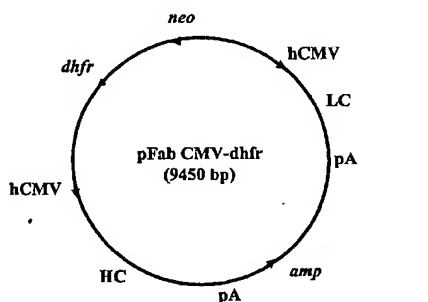
(75) Inventors/Applicants (for US only): LAI, Ching-Juh [US/US]; 7353 Heatherhill Court, Bethesda, MD 20817 (US). PURCELL, Robert, H. [US/US]; 15608 Ancient Oak Drive, Gaithersburg, MD 20878 (US).

(74) Agent: ALTMAN, Daniel, E.; KNOBBE, MARTENS, OLSON AND BEAR, LLP, 2040 Main Street, Fourteenth Floor, Irvine, CA 92614 (US).

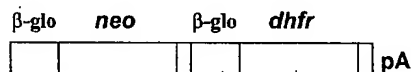
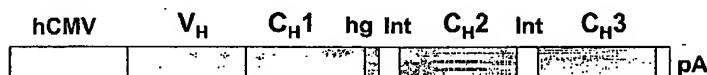
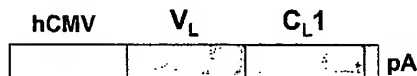
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

[Continued on next page]

(54) Title: MONOCLONAL ANTIBODIES THAT BIND OR NEUTRALIZE DENGUE VIRUS



A



B

(57) Abstract: The present invention relates to monoclonal antibodies that bind or neutralize dengue type 1, 2, 3, and/or 4 virus. The invention provides such antibodies, fragments of such antibodies retaining dengue virus-binding ability, fully human or humanized antibodies retaining dengue virus-binding ability, and pharmaceutical compositions including such antibodies. The invention further provides for isolated nucleic acids encoding the antibodies of the invention and host cells transformed therewith. Additionally, the invention provides for prophylactic, therapeutic, and diagnostic methods employing the antibodies and nucleic acids of the invention.

WO 2005/056600 A2



KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished upon receipt of that report

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.